WE CLAIM

1. A fuel cell comprising:

at least one individual cell with an electrolyte/electrode unit, and

at least one conducting end or intermediate plate via which a gaseous reactant can be supplied to at least one electrode of the at least one individual cell at least in one inlet region,

wherein the end or intermediate plate is designed to incorporate a heat exchanger which removes heat from an anode side of the at least one individual cell.

2. The fuel cell according to Claim 1, wherein the end or intermediate plate comprises air conducting channels or guiding areas configured in such a way that the gaseous reactant flows directly along the anode side and is subsequently supplied to a cathode inlet region.

3. The fuel cell according to Claim 1, wherein the end or intermediate plate is designed to achieve a flow reversal of the gaseous reactant in the heat exchanger.

4. The fuel cell according to Claim 1, wherein the end or intermediate plate comprises at least an anode flow section, at least one heat exchange section, and a cathode flow section.

5. The fuel cell according to Claim 2, wherein the end or intermediate plate is composed of at least two partial elements, wherein at least one section of the heat exchanger is incorporated between the at least two partial elements, and wherein said at least one section is connected in terms of flow with the cathode inlet region with respect to which the anode section is separated in terms of flow.

6. The fuel cell according to Claim 5, wherein a baffle is introduced between the at least two partial elements such that, in the heat exchanger, two partial flow regions, through which flow occurs successively and in opposite directions, develop.

7. The fuel cell according to Claim 6, wherein individual partial elements of the at least one end or intermediate plate comprise spacer elements so that the individual partial elements are arranged at a distance from an anode and a cathode of individual cells while forming flow regions.

8. The fuel cell according to Claim 7, wherein the spacer elements are nubs.

9. The fuel cell according to Claim 8, wherein the nubs are produced through an embossing or deposition method.

10. The fuel cell according to Claim 9, wherein surfaces of the nubs come into contact with the baffle and have good electric interconnection with the baffle.

11. The fuel cell according to Claim 1, wherein said at least one individual cell includes a first individual cell and a second individual cell, wherein the plate is an intermediate plate interposed between the first individual cell and the second individual cell, and wherein the heat exchanger is incorporated, in terms of flow, between an anode flow region of the first individual cell and a cathode flow region of the second individual cell.

12. A fuel cell operating process comprising:

supplying a gaseous reactant to at least one electrode of at least one individual cell at least in one inlet region by way of at least one conducting end or intermediate plate, and

removing heat from an anode side of the at least one individual cell by a heat exchanger incorporated in the end or intermediate plate.